

EPI Update for Friday, August 18, 2006
Center for Acute Disease Epidemiology
Iowa Department of Public Health (IDPH)

Items for this week's EPI Update include:

- **Tdap administration errors: "Double check those vaccine vials!"**
- **Giardia – is it spread from animals to humans?**
- **Baking and the risk of West Nile virus**
- **Meeting announcements**

Tdap administration errors: "Double check those vaccine vials!"

On March 20, guidelines were published in the MMWR: "Preventing Tetanus, Diphtheria, and Pertussis Among Adolescents: Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine." These guidelines include scenarios and recommendations in the event of a Tdap or DTaP administration error.

To help prevent inadvertent administration of Tdap when pediatric DTaP is indicated or vice versa, vaccine providers should review product labels before administering these vaccines; the packaging might appear similar. Tdap is not indicated for children aged less than 10 years. Tdap contains lower amounts of diphtheria toxoid and lower amounts of some pertussis antigens compared with pediatric DTaP. Studies of the immune responses to Tdap among infants have not been conducted.

Pediatric DTaP is not indicated for persons aged greater than or equal to 7 years; the increased diphtheria toxoid content is associated with higher rates of adverse reactions in older persons.

These recommendations on how to approach inadvertent inappropriate administration of Tdap or pediatric DTaP is based primarily on expert opinion. The family should be informed of any incorrect vaccine administration. Adverse events associated with inadvertent vaccine administration should be reported to the Vaccine Adverse Events Reporting System (VAERS) at <http://vaers.hhs.gov/>.

You can view these guidelines in the Centers for Disease Control and Prevention's (CDC) Morbidity and Mortality Weekly Report (MMWR). (March 24, 2006/Vol.55/ No. RR-3) at www.cdc.gov/nip/vaccine/tdap/tdap_child_summary.htm.

Tdap given inadvertently:

- Child younger than 7 years of age:
 - **Dose 1-2-3**
Action: Repeat ASAP with DTaP
 - **Dose 4-5**
 - **Action:** Count as a valid dose. Do not need to repeat using DTaP.

- Tdap vaccination recommendation would apply when the child becomes an adolescent.

Tdap given inadvertently:

- Child 7 to 9 years of age:
 - **Action:** Count the Tdap as a valid/protective dose.
 - This dose counts as the single adolescent Tdap dose.
 - Future doses should be Td: every 5 to 10 years.

DtaP given inadvertently:

- Adult:
 - **Action:** Count DTaP as a valid/protective dose.
 - This dose should be counted as the single Tdap booster.
 - Future doses should be Td: every 5 to 10 years

Giardia – is it spread from animals to humans?

The answer is both yes and no. Basically, there are “host specific strains” and “non-host specific strains” of giardia. Recent research and studies have demonstrated the majority of giardia isolates from any given species of animal are “host adapted” to that specific animal species.

The most common strain of giardia associated with human infection is *G. intestinalis*. That is the easy part – within the *G. intestinalis* strain, there are seven “subtypes”. Two of these subtypes, A and B, are infectious to humans. Subtype A can be subdivided further into A-I and A-II. In some studies it has been subdivided as A1, A2, A3 and A4. Type A-II in particular has been demonstrated to be host specific to humans and to date, has not been identified in other species of animals. *G. intestinalis* type A4 has only been found in dogs. Another species of giardia, *G. microti*, has been associated with rodents and dogs.

G. intestinalis A-I and B, are considered zoonotic, in other words they can be transmitted between animals and humans. *G. intestinalis* A-I and B have been found in swine, dogs, cats, farm animals and other species of animals, in addition to humans. All other *Giardia* species are not considered zoonotic at this time. Thus if a person is diagnosed with giardia, the organism is most likely the *G. intestinalis* that is host adapted to humans.

Remember: if you have a pet and/or work with farm animals, it is always important to practice proper hand washing.

Baking and the risk of West Nile virus

With the start of the State Fair last week, we thought this might bring a smile to the faces of all the fellow fair-goers out there. Part of the duties of being an epidemiologist within the Center for Acute Disease Epidemiology is fielding questions on acute disease from

the general public. In response to the high volume of West Nile virus calls from the general public since its arrival into Iowa in 2001, a West Nile virus general public hotline was established in 2003. A couple of years ago an epidemiologist received a call through the WNV hotline from a woman in Iowa who was getting ready to bake a pie for the pie contest at the state fair and was concerned about West Nile virus.

The epidemiologist, confused as to why baking a pie for the state fair would be associated with the risk of WNV, listened further to the woman explaining that she was making a “Blackbird Pie” from an old Laura Ingalls Wilder recipe. She was worried that the dead blackbirds she was going to use might be infected with West Nile virus.

The epidemiologist advised that there is no known risk of becoming ill from West Nile virus after consuming infected meat, but birds do carry this and other well-known and potentially serious food-borne illnesses if they are improperly handled or undercooked. The epidemiologist also recommended it might taste better if she used chicken or turkey instead of dead black birds.

The public health message is that there is no evidence that people can become infected with WNV from eating properly cooked meat from an infected bird. The small risk of infection from manipulating infected birds for whatever reason can be eliminated by proper handling (use of gloves, plastic bags, etc.). And always remember to cook any poultry thoroughly before it is consumed. The IDPH WNV general public hotline can be accessed by calling 1-866-WNV-IOWA.

Meeting Announcements:

No meeting announcements this week.

Have a healthy and happy week! And for those attending the State Fair, have a great time! Be sure to stop by the IDPH booth in the Varied Industries Building.

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